Triton Aqua Pump

Model: MAS-250V

Operating Instructions

Triton Systems
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Introduction

TRITON AQUA PUMP SYSTEM

System overview:

The TRITON AQUA PUMP SYSTEM is a ready to use complete water control system principally designed for use in below ground structures to control water ingress. The system consists of a pre-formed polyethylene sump basin, a mains powered 230v submersible pump, a non-return valve assembly and a battery operated high water level alarm, which is linked to an integral float switch. The system can be linked to TRITON AQUA CHANNEL (see Triton Aqua Channel Data) to manage water ingress from retaining walls and in turn pumping out to a suitable drainage point.

TRITON AQUA PUMP MAS250V

Pump description:

The TRITON AQUA PUMP MAS-250V is a strong and efficient pump in 304 stainless steel and thermoplastic. Excellent flow and head are produced from an energy efficient 250-watt motor. The close, compact positioning of the integral tube float switch and rubber feet ensure that this pump can work quietly in confined spaces ensuring it is particularly suited to basement and cellar applications. Long term, trouble free operation is enhanced with an integral vent valve to prevent air locking. The 410 stainless steel shaft incorporates a hardwearing mechanical seal and an oil seal (within an oil chamber) and a semi-vortex, thermoplastic impeller. Each pump is supplied with:

1) one set of (3) leg extensions for assist duties/high level alarm/twin pump systems
2) 1 x 50mm to 32mm reducing nipple
3) 1 x 32mm non-return valve
4) 5 metres of heavy duty, rubber power cable.

The TRITON AQUA PUMP MAS-250V must only be used for pumping ground water. The pump should not be used to pump grey water from; sinks/washing machines/ dishwashers/condensing boilers or effluent. Triton Chemical Manufacturing Co Ltd will not accept responsibility or liability for pump failure or damage caused due to the misuse of the pumping system.

Safety

Read all instructions before use.

Keep all pump equipment away from the reach of children.

These pumps are not suitable for pumping salt water, corrosive, explosive or flammable liquids (petrol, thinners).

Do not modify the pump in any way.

Do not operate the pump if anyone is in the water/liquid you are pumping.

Do not lift or carry the pump by the power cable or float cable.

Before taking action of any kind on the pump, make sure it is disconnected from the power supply.

Do not operate or connect to a power supply if there are any signs of damage to the pump or the power cable.

Do not try to disconnect the power cable plug from the mains by pulling on the power cord.

17th edition regulations states you must always use a power breaker for outside use. We recommend you should use one for inside use too.

Specification

Discharge Bore	-	40mm
Max. Head	-	7m
Max. Capacity	-	240 litres/min @ 1m
Motor Output	-	1/3 Hp
Width	-	164mm
Height	-	352mm
Length	-	236mm
Voltage	-	230v
Fuse rated	-	5.0amp

Pump installation:

Insert the TRITON AQUA PUMP MAS-250V in the base of the sump basin and connect the water discharge pipe to the flexible coupling already attached to the pump. The discharge end of the pipe can be taken through a wall and extended to a gully outlet at ground/street level. Alternatively, the discharge pipe can be connected straight into a soil pipe using a 'boss' connection. Where a double pump installation is being used (Aqua Pump Plus), each pump must be wired into an independent fused spur outlet. One of the Aqua Pumps (the secondary pump) in the double pump kit must be fitted with 25mm leg extensions at the base of the pump so that this pump is raised off the bottom of the sump basin.

Connect the wires from the float switch sensor to the wires of the water alarm using the bullet connectors provided. Then connect the pump/s power cable into a fused spur outlet (fuse rating 5amp) and test the pump and alarm for working order.

Pump operation:

The pump is positioned within the Sump Basin and is controlled by an automatic snap-action, tube, float switch. As the water level increases within the sump the float rises and when the pre-set switch level is reached the pump will automatically operate and discharge the water. The Pump is 230v and requires wiring into an independent fused spur outlet within 1.5m of the pump.

Non-return valve assembly:

To avoid any discharged water backing-up into the sump basin, a non-return valve assembly is provided. This is fitted to the submersible pump with the supplied reducing nipple. Care should be taken that the rubber flap valve opens in the direction of the pipe i.e. away from the pump. The valve will accept a standard 40mm waste pipe.

Pump maintenance:

The TRITON AQUA PUMP MAS-250V has 1 year guarantee from the date that it is installed. A further 2 years is given (taking the guarantee up to 3 years) if the pump is maintained /serviced at a minimum every six months. This should be carried out by a competent contractor (under a maintenance contract). During a service all parts of the kit should be checked to ensure fully operational. The sump should be cleared of any silt/sludge that may have accumulated to avoid potential damage to the pump/s.

The sump must be filled with water to ensure the automatic float switch and pump are fully operational. Any defective or worn parts must be replaced /repaired to avoid failure of the whole system. Example of suitable sump, pump and drainage schedule can be found in the Isola manual, or downloaded from the Triton website below: www.tritonsystems.co.uk

Records must be kept of each service be kept by the property owner.

Features

- The MAS-250V has a built in overload switch that shuts the pump down if over heating occurs, the pump then restarts once the motor has cooled down. Over heating can occur in the event of dry running or restricted flow, if this does occur it is important to identify the cause of the over heating and act to prevent it.

Automatic tube float Switch.

3 x Leg extensions
(longer than factory fitted versions)

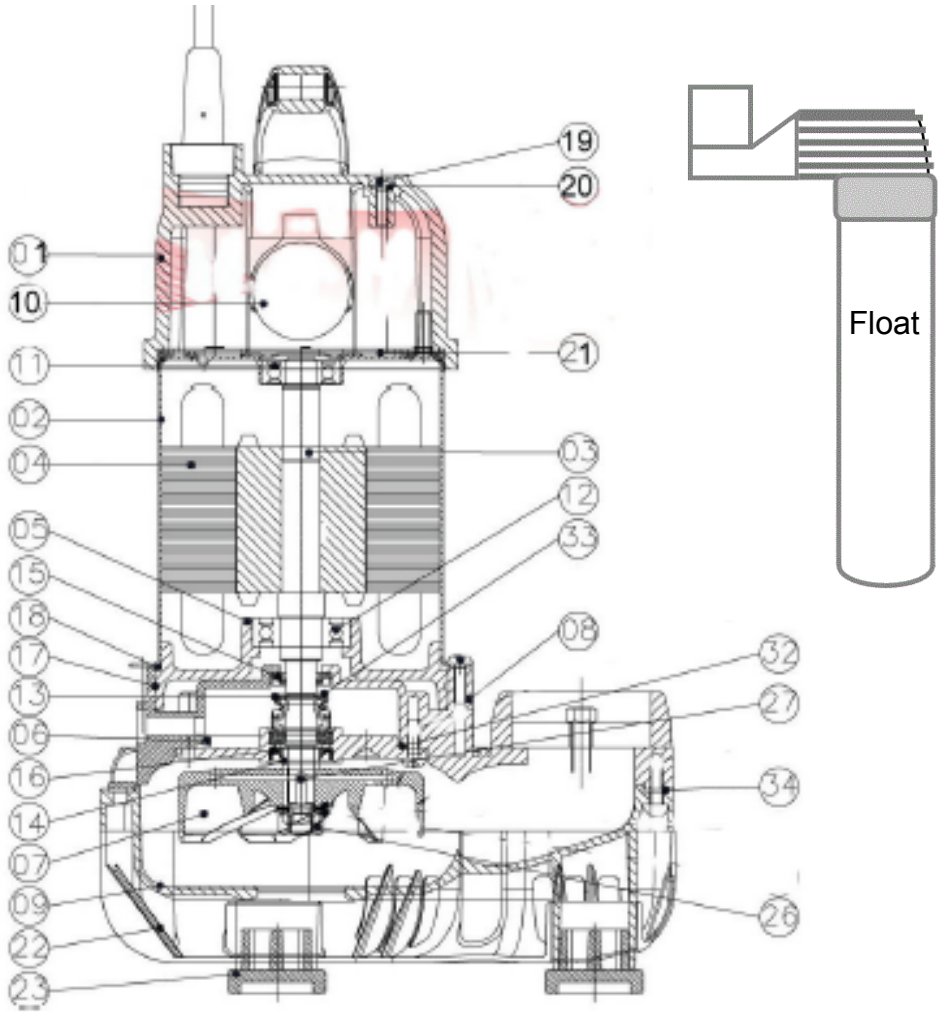
- The MAS-250V is supplied with leg extensions, when used in a twin pump arrangement, along side a standard MAS pump with origanal feet, it creates a backup/assisst setup. The pump with extented feet will only operate when the pumping fluid is coming in quickly to assist or if the initial pump has failed it will operate as a back-up.

- This 32mm one way valve is included which prevents the back flow of fluid from the pipework.

- Also supplied with a 32mm - 50mm nipple to connect the valve, above, to the pump.

Construction

NO	Description	Material	NO	Description	Material
1	Top Cover	NL+GF	16	Oil Seal	
2	Motor Housing	SUS304	17	O-ring	
3	Rotor & Shaft	SUS410	18	O-ring	NBR
4	Stator	C60	19	O-ring	NBR
5	Bearing Cover	FC200	20	Packing	NBR
6	Oil Seal Cover	NL+GF	21	Screw	SUS304
7	Impeller	SUS430+PU	22	Strainer	NL+GF
8	Upper Pump Casing	NL+GF	23	Feet	NBR
9	Lower Pump Casing	PP+GF	26	Nut	SUS304
10	Capacitor		27	Key	SUS304
11	Bearing	SUJ2	32	O-ring	NBR
12	Bearing	SUJ2	33	Retaining Ring	SUS304
13	Mech. Seal	CA/CE			
14	Sleeve	SUS304	34	Packing	NBR
15	Oil Seal	NBR			



Trouble shooting

Problem	Causes	Solutions
Pump will not run/ circuit breaker trips/fuse blows.	• Faulty or switched off power supply. • Fault or break in the power cable or float cable. • Water level not deep enough to activate float. • Blocked impeller(pt.no.7) • Motor protector may be operational. • Fuse rating too small. • Defective motor.	• Check power supply. • Inspect the cable for any damage. If damage is found do not attempt to run the pump. • Wait for water level to rise more. • Casing can be removed and debris cleared. • Disconnect power supply and leave the pump for a few minutes to cool. • Fit correct rated fuse. • Contact your supplier.
Pump runs but no liquid is delivered.	• Blockage in the outlet pipe. • Blockage of inlet of pump casing. • Outlet pipe kinked. • Pump is air-locked. • Non-return valve stuck or wrong way round.	• Unblock by jetting or roding the outlet pipe. • Clear and wash away any blocking debris. • Un-kink outlet pipe. • Start and stop pump several times and/or check for clogged vent hole in pump case. • Remove pipe and inspect non-return valve, clear or fit other way
Insufficient flow rate.	• Debris blocking outlet pipe . • Outlet pipe kinked. • Blockage of inlet of pump casing. • Too much head, outlet pipe too long or diameter too small.	• Unblock by jetting or roding. • Un-kink outlet pipe. • Clear and wash away any blocking debris. • Reduce head or length of outlet pipe, or increase diameter of outlet pipe.
Pump will not switch off.	• Float maybe obstructed and unable to return to an off position.	• Check for any obstructions to float and clear them.
Pump is vibrating excessively &/or is noisey.	• Motor bearings (pt.no.11 & 12) are damaged. • Loose debris in the pump casing (pt.no.8/9).	• Contact your supplier. • Casing can be removed and debris cleared.

Warranty

Warranty is offered for a period of one year from date of purchase or 3 years if serviced every 6 months and covers failure of equipment due to faulty components or assembly. Warranty covers parts and labour only and excludes any carriage charges to the supplier's works. Fair wear and tear and mis-use are excluded from any warranty. Triton Systems reserves the final decision regarding validity of any claim.

Customers shall not attempt any repair or adaptation to equipment during the warranty period, or use the equipment for any purpose other than for which it was designed. Any such interference or mis-use will negate any claim for warranty.

Declaration of Conformity

Product : **MAS-250V**

Manufacturer: Hung Pump Industrial Co. Ltd.

Address: 16 Lian-Ming Street
Ba-de City
Taoyuan
Taiwan 334
R. O. C.

Imported by: **UK Agents of Hung Pump Industrial Ltd for:**

Triton Chemical Manufacturing Company Ltd
Units 3 – 5 Crayford Commercial Centre
Greyhound Way, Crayford, Kent. DA1 4HF

We hereby declare that the above mentioned products conform to the following EU directives:

EN 60335-2-41: 2003 + A1:2004 + A2:2010

EN 60335-1: 2002 (incl. Corr.:2009/2010) + A11:2004 + A1:2004 + A12:2006 + A2:2006 + A13:2008 + A14:2010

EN 62233: 2008 (incl. Corr.:2008)

Person responsible for this declaration:

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Jason Lien
Director of Engineering
Hung Pump Industrial Co. Ltd.